

NASA Range Safety Program 2006 Annual Report

SUPPORT TO PROGRAM OPERATIONS SELF SERVICE MANAGEMENT TOOL (SSMT) DATABASE

The *NASA Safety Manual*, NPR 8715.3, specifically states Agency safety priorities for the public, astronauts and pilots, the NASA work force, and high value equipment and property. NPR 8715.5, *NASA Range Safety Program*, describes the roles and responsibilities, requirements, and procedures for protecting the safety of the public, the workforce, and property during range operations associated with flight. To meet these procedural requirements, the risk posed to human life and property must be evaluated as either acceptable or unacceptable.

If management determines the risk is too high, then mitigations must be devised to lower the assessed risk to an acceptable level. Risk mitigation actions—based on debris, toxic, and far-field risk modeling results—must be implemented, monitored, and executed to contain or mitigate the hazard to a level acceptable for operations to continue.

In January 2006, Mr. James Kennedy signed a Center Director's Communication regarding the importance of the SSMT database. This communication is included below:

CENTER DIRECTOR'S COMMUNICATION

CD COMM #2006-01

January 9, 2006

AA

TO: All Kennedy Space Center (KSC) Civil Service and Contractor Employees

SUBJECT: KSC Launch/Landing Risk Assessments

In keeping with NASA core values, personnel safety continues to be a high priority not only during day-to-day activities but also during spaceflight operations. What you may not know is that for every Shuttle and Air Force launch or landing, our KSC Range Safety team is assessing personnel risks in the effort to ensure these operations are performed safely. Along with vehicle readiness, these assessments are an important factor in determining whether an operation can proceed. By necessity, these assessments need to be as accurate as we can make them. One of the main factors affecting accuracy is knowing where our personnel are during these activities.

Our KSC Range Safety team has been working on a simple way to collect this information, and it involves the use of a database called Self-Service Management Tool (SSMT). This database allows you to identify your normal work locations/times and now has the ability to capture where you will be located for upcoming launch/landing events for those of you who move from one location to another when supporting these activities.

In the coming days, you will see an announcement in the "KSC Daily News," where the team has embedded a direct link to the SSMT database input wizard. This wizard is straightforward and should take no more than a few minutes to complete. However, if you should have any difficulties utilizing the database, there will be contact information within the announcement to assist you. There also will be a [Spaceport News](#) article providing more information and detailing the importance and relevance of this effort.

In summary, I fully endorse this initiative and expect all KSC personnel to provide their information into SSMT. I understand this is yet another task added to your busy schedules; however, this information is essential in our effort to protect you—our most valuable resource.

To start right now, you can access the following link: [SSMT Launch Activity Wizard](#).

Original Signed by
James W. Kennedy

NASA Range Safety Program 2006 Annual Report

SUPPORT TO PROGRAM OPERATIONS SELF SERVICE MANAGEMENT TOOL (SSMT) DATABASE

Risk Assessments

NASA Range Safety assesses the risk to the public and personnel for safe operations on Kennedy Space Center using computer models to produce risk assessments. These assessments are considered for clearance to proceed with a launch and/or landing operation. The assessments must be as accurate as possible to reduce the need to make conservative decisions. Visitor numbers and locations are typically provided by Kennedy Space Center External Relations for popular viewing locations such as the Kennedy Space Center Visitor's Center, NASA Causeway and the Launch Complex 39 Press Site.

One of the main factors for assessment accuracy is the location of personnel; specifically, numbers of personnel, categories of personnel (Mission Essential, Operations, or Non-Essential), when personnel work, and where personnel work during launch and landing time (buildings, rooms, floors, or outside areas).

Self-Service Management Tool

The Self-Service Management Tool is one of the prime information sources Range Safety analysts use to collect information to assess risk to Kennedy Space Center personnel and property. The program has been in use for some time for a number of other activities.

The current capability captures personnel locations and shift information for normal duty hours. NASA Range Safety saw great potential in using this system since personnel were familiar with it and it captures information down to the room level. NASA Range Safety sponsored adding a launch/landing module to the system database so information could be gathered for each launch for all personnel.....not just those supporting a particular launch.

Using the Self-Service Management Tool

To access the tool database system, visit <http://ssmt.ksc.nasa.gov/launchactivitywizard>. From the Kennedy Space Center internal home page, a link is provided that will take you to the Launch Activity Support Wizard shown below. Clicking the Continue button takes you to the next screen.

The screen at right allows you to sign in to the Launch Activity Support Wizard using your normal log-on information. Clicking the Submit button takes you to the Normal Locator Information screen.

At the Your Normal Locator Information screen, you can view and modify your normal locator information. Clicking the Continue button takes you to the Step 3: Add Launch Activity screen.

NASA Range Safety Program 2006 Annual Report

SUPPORT TO PROGRAM OPERATIONS SELF SERVICE MANAGEMENT TOOL (SSMT) DATABASE

Step 3: Add Launch Activity, shown in the screen to the right, allows you to enter information for your location during a specific launch activity. If your location is the same as your normal locator information, just check the Use Normal Locator Information box and continue and click Submit.

This step also allows you to designate your launch status (Mission Essential, Operations, launch activity).

The Step 4: Add Landing Activity screen allows you to enter the same type of information that you entered for launch. Clicking Submit takes you to the final screen.

The final screen lets you know if you completed entering your information appropriately and allows you to migrate to others areas of the system.

The Importance of Self-Service Management Tool Data

Along with the type of launch vehicle, Range Safety analysts use this information about personnel and other numerous parameters, such as winds, building structures, and failure rates, to determine risk estimates.

It is critical that Kennedy Space Center personnel update their information in the Self-Service Management Tool database at least quarterly to ensure day-to-day information is correct. Personnel should also update the information for each launch and landing event for Shuttle and expendable launch vehicle activities on Cape Canaveral Air Force Station. Kennedy Space Center Range Safety ensures up-to-date launch and landing manifest selections are available in the Self-Service Management Tool program.

The continued use of the Self-Service Management Tool program greatly enhances the protection of Kennedy Space Center's most valued resource—its people.